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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,645	10/27/2003	Timothy M. Morris	PA-004.02739-US (03-634)	4007
52237 7590 02/14/2011 BACHMAN & LAPOINTE, P.C. c/o CPA Global P.O. Box 52050 Minneapolis, MN 55402			EXAMINER DINH, TIEN QUANG	
			ART UNIT 3644	PAPER NUMBER
			MAIL DATE 02/14/2011	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/694,645	Applicant(s) MORRIS ET AL.	
	Examiner Tien Dinh	Art Unit 3644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 November 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20,23-31,33 and 34 is/are pending in the application.
- 4a) Of the above claim(s) 28-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20,23-27,30,31,33 and 34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7-12-10</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 20 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 20, third line from the bottom, "said rotor drive shaft" lacks antecedent basis.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 20, 23-25, and 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wojciehowski et al in view of Schafer et al.

Wojciehowski et al teaches a system for generating accessory power from a gas turbine engine that uses a pneumatically operated means 26 for receiving bleed air and controlled by a control valve 46 and for generating power to operate equipment onboard (see figure 1) on the aircraft but is silent on the means for monitoring torque change on a rotor drive shaft which is

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indicative of a power demand and means for supplying information about said monitored torque to the FADECs. Schafer et al teaches that FADECs (which has feedback loops) are well known in the art to monitor and control elements in an engine system (which seems to include the torque of the engine) are well known in the art. Schafer et al's FADEC monitors the engine speed (see column 1, line 42) as well as the power requested. See column 2, line 30-44. The engine speed is equal to power divided by the torque. Hence, although Schafer et al doesn't mention "torque" it seems evident that torque is supplied to and is monitored by Schafer et al's FADEC.

It would have been obvious to one skilled in the art at the time the invention was made to have used FADECs in Wojciehowski et al's system as taught by Schafer et al to safely and efficiently generate power to operate the aircraft equipments. Plus, the FADEC system also monitors the performance of the engine to optimize its performance and supplied necessary power to other components on the aircraft.

As for the last paragraph of amended claim 20, Wojciehowski et al teaches that the pneumatically operated means 26 for receiving bleed air and for generating shaft power (the shaft can be seen attached to the element 26 and clearly extends aft to drive the pump 28. This reduces demand for shaft power from the rotor drive shaft, which leads to increasing stall margin available to a high pressure compressor of engine.

Re claim 33, the drive shaft is a rotor drive shaft of the engine.

Claims 26, 27, and 30-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wojciehowski et al as modified by Schafer et al, as applied to claim 34 above, and further in view of the admitted prior art on page 5, paragraph [0028] and/or Munoz et al 6663044.

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Wojciehowski et al as modified by Schafer et al discloses all claimed parts except for the pneumatically integrated generators for supplying electrical or mechanical power. However, the admitted prior art on page 5, paragraph [0028] teaches that pneumatically integrated generators that supply electrical and mechanical powers are well known in the art. Alternatively, Munoz et al teaches

It would have been obvious to one skilled in the art to have used additional pneumatically integrated generators in Wojciehowski et al's system as modified by Schafer et al and as taught by the admitted prior art on page 5, paragraph [0028] to generate power for other accessories. Please note that accessories such starter/generators, fuel pumps, etc. and gearboxes are well known in this day and age and one skilled in the art can used the pneumatically integrated generators to generate power to supply power to the accessories.

Response to Arguments

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

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As for the applicant's contention that Shafer fails to show any means for sensing torque change on the drive shaft which is indicative of a power demand change and a means for supplying information about the sensed torque change to a FADEC. The examiner respectfully disagrees. FADECs monitor the change in power needed. Shafer et al's FADEC monitors the engine speed (see column 1, line 42) as well as the power requested. See column 2, line 30-44. The engine speed is equal to power divided by the torque. Hence, it is quite reasonable to a person skilled in the art to realize that since engine speed is related to power and torque, torque is clearly known. This known torque is supplied to and is monitored by Schafer et al's FADEC. When Wojchiehowski et al is modified by Shafer, the FADEC would monitor the change in power. The use of the electronic system (FADEC) would clearly improve the performance of Wojchiehowski et al's system. This was agreed by the board of appeal's decision dated 1/29/09.

In response to applicant's contention that paragraph 28 is not admitted prior art, the examiner would like to point out that the first instance of using paragraph 28 in a rejection dates back to a non-final rejection, which was mailed on 11/4/2004. Applicant has not argued this admitted prior art until now. Nevertheless, paragraph 28 does mention pneumatically integrated generators that supply electrical and mechanical powers are well known in the art. Specifically, it is stated that "The device 42 may be any suitable device known in the art for delivering electrical power to operate the drives for one or more of the aforementioned accessories or any other accessories that require power. Examples of suitable pneumatically operated devices which may be used for the device 42 include, but not limited to, an air turbine, etc." A person skilled in the art would have used additional pneumatically integrated generators in

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Wojciehowski et al's system to generate power for other accessories. Furthermore, applicant has not provided any criticality as to why the specifically claimed parts (e.g. as lube pump, a PMA, etc.) is critical. Finally, applicant is advised to look at MPEP 2129 for the admission of prior art.

Applicant has also changed the dependency of claims 28 and 29 to claim 34. Original election of group I, species A filed on 8/20/04 means that claims 28 and 29 are withdrawn for further consideration. See the non-final rejection dated 11/4/04.

The examiner asks the applicant to call the examiner to discussed the proposed amendment to put the application in condition for allowance.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The applicant is advised to look at Munoz et al 6663044, which shows the use of bleed air to power elements 86 and elements 84, which is an accessory drive.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tien Dinh whose telephone number is 571-272-6899. The examiner can normally be reached on 12-8.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Collins can be reached on 571-272-6886. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tien Dinh/

Primary Examiner, Art Unit 3644